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**TITLE 329 SOLID WASTE MANAGEMENT BOARD**

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**FINDINGS AND DETERMINATION OF THE COMMISSIONER  
PURSUANT TO [IC 13-14-9-7](#) AND SECOND NOTICE OF COMMENT PERIOD**  
LSA Document #07-552

**DEVELOPMENT OF NEW RULES CONCERNING EXCLUSION OF A HAZARDOUS WASTE FROM  
REGULATION UNDER [329 IAC 3.1](#) (DELISTING)**

**PURPOSE OF NOTICE**

The Indiana Department of Environmental Management (IDEM) has developed draft rule language for new rules for exclusion of a hazardous waste from regulation under [329 IAC 3.1-5-2](#) (delisting). The purpose of this notice is to publish the commissioner's tentative recommendation for rulemaking and to seek public comment on the recommendation and the draft rule, including suggestions for specific language to be included in the rule. IDEM seeks comment on the affected citations listed and any other provisions of Title 329 that may be affected by this rulemaking.

**CITATIONS AFFECTED:** [329 IAC 3.1-6-8](#).

**AUTHORITY:** [IC 13-14-8](#); [IC 13-14-9](#); [IC 13-22-2](#).

**STATUTORY REQUIREMENTS**

[IC 13-14-9-7](#) recognizes that under certain circumstances it may be appropriate to reduce the number of public comment periods routinely provided. In cases where the commissioner determines that the rulemaking policy alternatives available to IDEM are so limited that the notice of first public comment period would provide no substantial benefit, IDEM may forgo this comment period and proceed directly to the notice of second public comment period.

If the commissioner makes the determination of limited rulemaking policy alternatives required by [IC 13-14-9-7](#), the commissioner shall prepare written findings and include them in the second notice of public comment period published in the Indiana Register. This document constitutes the commissioner's written findings pursuant to [IC 13-14-9-7](#).

The statute provides for this shortened rulemaking process if the commissioner determines that "the rulemaking policy alternatives available to the department are so limited that the public notice and comment period under [\[IC 13-14-9-3\]](#) . . . would provide no substantial benefit to:

- (1) the environment; or
- (2) persons to be regulated or otherwise affected by the proposed rule."

**SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING**

**Background**

"Delisting" is the process of excluding a hazardous waste that is listed in 40 CFR 261, Subpart D, from regulation as hazardous waste if the generator can show that the waste no longer meets the criteria for which it was listed as a hazardous waste and that it will not exhibit a hazardous waste characteristic. Once delisted, the waste may be disposed of in a solid waste landfill permitted under [329 IAC 10](#).

This proposed delisting is a "conditional exclusion" for a waste that may exhibit future variability that excludes the waste so long as it is managed in accordance with specific conditions, such as periodic testing.

P.L.128-1997 and P.L.45-1997 required the Solid Waste Management Board to "adopt rules that provide procedures and criteria for delisting wastes as hazardous wastes." These statutes also required IDEM to "apply to the United States Environmental Protection Agency (EPA) for authority to receive petitions and delist wastes under 40 CFR 260.20 and 40 CFR 260.22.". Delisting rules were adopted at [329 IAC 3.1-5-2](#) and [329 IAC 3.1-5-3](#), effective March 19, 1998. IDEM received EPA authorization for delisting on January 4, 2001.

Under [IC 13-22-2-3](#), generators of hazardous wastes may petition IDEM to exclude a specific hazardous waste listed in 40 CFR 261, Subpart D, that is generated at a particular facility from regulation as a hazardous waste under [329 IAC 3.1](#). This petition must be submitted in accordance with [329 IAC 3.1-5-2](#). The petition must include the information and meet the criteria required by 40 CFR 260.22 (incorporated by reference in [329 IAC 3.1-5-3](#)).

Before petitioning for a delisting, the waste generator must sample the waste over time and analyze the waste for hazardous waste constituents listed in 40 CFR 261, Appendix VIII. This testing must be done following a sampling and analysis plan approved by IDEM. The data resulting from this testing is incorporated into the petition for delisting.

Upon receipt of a petition that meets the requirements of [329 IAC 3.1-5-2](#), IDEM evaluates the petition:

- (1) to determine that the information provided in the petition complies with the requirements of 40 CFR

260.22;

(2) to determine that the waste will meet the criteria in 40 CFR 260.22 when delisted;

(3) to determine that exclusion of the waste from regulation under [329 IAC 3.1](#) will not result in increased risk to human health and the environment; and

(4) to determine that the delisted waste can be safely managed as described in the petition.

The specific criteria for delisting are contained in 40 CFR 260.22. The petitioner must demonstrate in the petition that the waste proposed for delisting meets all applicable criteria.

Delisting of a waste under [329 IAC 3.1-5-2](#) affects waste generated, managed, and disposed of in Indiana. No other state recognizes Indiana's delisting authority. A waste generated in Indiana and delisted under [329 IAC 3.1-5-2](#) will be considered a hazardous waste when it is transported outside of Indiana unless it has also been delisted by the EPA under 40 CFR 260.20 and 40 CFR 260.22 or by the receiving state.

### **Petition for Delisting**

On March 29, 2007, Alcoa, Inc. (Alcoa) petitioned IDEM to exclude a hazardous waste from listing in 40 CFR 261, Subpart D, incorporated by reference at [329 IAC 3.1-6-1](#), also known as delisting. The hazardous waste to be delisted is described in 40 CFR 261.31 as "F019: Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process". The particular hazardous waste for which delisting is sought is wastewater treatment sludge from the chemical conversion coating of aluminum sheet generated at Alcoa's Warrick Operations in Newburgh, Indiana. The delisted waste would be disposed of only at a municipal solid waste landfill permitted under [329 IAC 10](#) or a hazardous waste disposal facility permitted under [329 IAC 3.1](#). The petition requested delisting of up to 4,200 cubic yards of this particular wastewater treatment sludge annually. The petition met all criteria for delisting petitions in [329 IAC 3.1-5](#).

The petition and all documents related to IDEM's review and analysis of the petition are available for viewing and copying in the Indiana Department of Environmental Management, Centralized File Room, Indiana Government Center-North, 100 North Senate Avenue, Room N1201, Indianapolis, Indiana.

### **Description of Proposed Action**

IDEM is proposing to grant the petition submitted by Alcoa for the Warrick Operations plant to exclude a hazardous waste from regulation under the hazardous waste rules in [329 IAC 3.1](#). F019 wastewater treatment sludge waste is generated when aluminum components undergo a treatment process to prepare them for coating. The conversion coating process prepares and cleans metals surfaces to accept paint. The F019 waste is listed for hexavalent chromium and cyanide. The F019 waste causes wastewater treatment sludge from this plant to be a hazardous waste. IDEM evaluated all constituents in the plant's wastewater in reviewing this petition.

### **Analysis of the Petition**

The petition was evaluated by the Science Services Branch of the Office of Land Quality using the current procedures and methods used by the EPA.

A risk assessment using a fate and transport model was used to predict concentrations of hazardous constituents released from the waste after disposal to evaluate the potential impacts on human health and the environment. The risk assessment set specific concentrations that the waste, as a total concentration, or extracts of the waste must meet. The risk assessment was based on a specified annual volume of waste disposed and the disposal method. However, the total concentration constituent levels found in this waste are at such low levels compared to the total concentration delisting levels that it is very unlikely the waste could contain those levels. Therefore, the total concentration delisting levels are not used to determine delisting eligibility.

The risk assessment was done using Delisting Risk Assessment Software (DRAS) developed by EPA Region 6. Version 2.0 of the DRAS software was used with amendments and updates provided by EPA Region 5.

The analytical results show that the extract concentrations determined using the Toxicity Characteristic Leaching Procedure (TCLP) (Method 1311 from SW-846) are below the levels requiring treatment under the land disposal restrictions of 40 CFR 268. The waste does not exhibit the characteristics of toxicity or reactivity. No other hazardous waste constituents were detected in the waste during testing for the petition.

### **Summary of Proposed Conditions for Exclusion**

IDEM is proposing conditions for granting this petition that include the following:

(1) The delisted waste must not exceed any of the delisting concentrations for constituents of concern in Table 1 of the draft rule.

(2) The maximum annual volume of waste to be delisted under this petition is 4,200 cubic yards per year.

(3) Alcoa must demonstrate on a quarterly basis that the constituents detected in the initial analysis are below the delisting levels in Table 1 of the draft rule. Alcoa must extract a representative sample of the waste using Method 1311, "Toxicity Characteristic Leaching Procedure". The extracts must be analyzed for the constituents listed in Table 1 of the draft rule using Method 6010B, "Inductively Coupled Plasma-Atomic

Emission Spectrometry" or Method 6020, "Inductively Coupled Plasma-Mass Spectrometry", and Method 7470A "Mercury in Liquid Waste (Manual Cold-Vapor Technique)", found in U.S. Environmental Protection Agency Publication SW-846, "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," Third Edition. Detection levels of the methods used must be equal to or lower than the delisting levels. The same level of analytical quality control used in the petition must be used in the quarterly verification analysis.

(4) If waste testing shows that any constituent has exceeded the delisting level for that constituent, Alcoa must notify IDEM in writing within 10 days of first possessing or being made aware of such data and must manage the delisted waste as hazardous waste until Alcoa receives written approval from the department to resume managing the waste under this exclusion.

(5) Alcoa must submit to IDEM an annual report by February 1 of each year describing the previous year's annual test results.

(6) Alcoa must compile and summarize the records of operating conditions and analytical data and maintain those records on site for at least five years. Alcoa must make these records available for inspection. All reports must include a signed copy of the certification statement required by 40 CFR 260.22(i)(12).

(7) Alcoa must notify IDEM if the manufacturing process that generates the waste or the chemicals involved change and must manage any waste generated after the process change as a hazardous waste until Alcoa demonstrates that the waste meets all delisting levels and it has received written approval from IDEM to continue to manage the waste under this exclusion.

(8) After disposal of the waste, if at any time Alcoa has any information, including, but not limited to, extract data, that any constituent listed in Table 1 is at a level in the extracts that exceeds the delisting level for that constituent, Alcoa must report that information in writing to IDEM within 10 days of first receiving such information.

(9) The delisted waste must be disposed of in either a municipal solid waste landfill permitted under [329 IAC 10](#) or a hazardous waste disposal facility permitted under [329 IAC 3.1](#).

#### **[IC 13-14-9-4](#) Identification of Restrictions and Requirements Not Imposed Under Federal Law**

No element of the draft rule imposes either a restriction or a requirement on persons to whom the draft rule applies that is not imposed under federal law. This rule is authorized under [IC 13-22-2-3](#). While this delisting imposes a number of conditions on the generator (petitioner), these conditions and the proposed delisting meet the federal standards for delisting at 40 CFR 260.20 and 40 CFR 260.22. Indiana was authorized by EPA to delist hazardous wastes on January 4, 2001 (66 FR 733). This delisting will result in streamlined hazardous waste management operations and significantly reduced costs for the petitioner.

#### **Potential Fiscal Impact**

This rulemaking will result in an annual cost savings of approximately \$250,000 to Alcoa, resulting from disposal of the wastewater treatment sludge in facilities permitted under [329 IAC 10](#) rather than hazardous waste disposal facilities. This assessment is based on information provided by the Alcoa Warrick Operations solid and hazardous waste manager.

#### **Public Participation and Workgroup Information**

No workgroup is planned for the rulemaking. If you feel that a workgroup or other informal discussion on the rule is appropriate, please contact Steve Mojonier of the Office of Land Quality, (317) 233-1655 or (800) 451-6027 (in Indiana).

#### **Small Business Assistance Information**

IDEM established a compliance and technical assistance (CTAP) program under [IC 13-28-3](#). The program provides assistance to small businesses and information regarding compliance with environmental regulations. In accordance with [IC 13-28-3](#) and [IC 13-28-5](#), there is a small business assistance program ombudsman to provide a point of contact for small businesses affected by environmental regulations. Information on the CTAP program, the monthly CTAP newsletter, and other resources available can be found at:

[www.in.gov/idem/ctap](http://www.in.gov/idem/ctap)

Small businesses affected by this rulemaking may contact the Small Business Regulatory Coordinator:

Christina Lowry  
IDEM Compliance and Technical Assistance Program  
OPPTA - MC60-04  
100 North Senate Avenue  
W-041  
Indianapolis, IN 46204-2251  
(317) 234-1191  
[clowry@idem.in.gov](mailto:clowry@idem.in.gov)

The Small Business Assistance Program Ombudsman is:

Megan Tretter  
IDEM Small Business Assistance Program Ombudsman  
MC 50-01– IGCN 1301  
100 North Senate Avenue  
Indianapolis, IN 46204-2251  
(317) 234-3386  
mtretter@idem.in.gov

## FINDINGS

The commissioner of IDEM has prepared written findings and a tentative recommendation regarding rulemaking on delisting of the waste described in the petition submitted by Alcoa. These findings are prepared under [IC 13-14-9-7](#) and are as follows:

- (1) Based on the department's analysis of the petition described above, I have determined that the waste described in the petition meets the criteria in 40 CFR 260.22 for delisting when tested as in the petition. At this time, I recommend that the waste described in the petition be excluded from regulation under [329 IAC 3.1-5-2](#) with certain conditions as described in the draft rule attached to and incorporated in these findings. This recommendation is subject to public comment as provided below. This recommendation may be modified or reversed based on the comments received.
- (2) I have determined that under the specific circumstances pertaining to this rule, the rulemaking policy alternatives are so limited that the public notice and comment period provided in the notice of first public comment period would provide no substantial benefit to the environment or to persons to be regulated or otherwise affected by the rule.
- (3) The draft rule is hereby incorporated into these findings.

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Thomas W. Easterly  
Commissioner  
Indiana Department of Environmental Management

## INFORMAL PUBLIC HEARING

[329 IAC 3.1-5-2](#)(d) states that the commissioner may hold an informal public hearing to consider oral comments on the tentative recommendation for rulemaking. A person requesting a hearing must state the issues to be raised and explain why written comments would not suffice to communicate the person's views. A person who requests an informal public hearing on this petition must submit the request in writing to the address below.

## REQUEST FOR PUBLIC COMMENTS

This notice requests the submission of comments on both the tentative recommendation for rulemaking and the draft rule language, including suggestions for specific revisions to language to be contained in the rule. Mailed comments should be addressed to:

#07-552(SWMB)[Alcoa F019 Delisting]  
Marjorie Samuel  
Office of Land Quality  
Indiana Department of Environmental Management  
100 North Senate Avenue MC 66-20  
Indianapolis, Indiana 46204-2251

Hand delivered comments will be accepted by the receptionist on duty at the eleventh floor reception desk, Office of Land Quality, 100 North Senate Avenue, Eleventh Floor East, Indianapolis, Indiana.

Comments may be submitted by facsimile at (317) 232-3403, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Rules, Planning and Outreach Section at (317) 233-1655 or (317) 232-7995.

## COMMENT PERIOD DEADLINE

Comments must be postmarked, faxed, or hand delivered by October 12, 2007.

Additional information regarding this action may be obtained from Steve Mojonier of the Office of Land Quality, (317) 233-1655 or (800) 451-6027 (in Indiana).

## DRAFT RULE

SECTION 1. [329 IAC 3.1-6-8](#) IS ADDED TO READ AS FOLLOWS:

**[329 IAC 3.1-6-8](#) Waste excluded from regulation; Alcoa Corporation, Warrick Operations, Newburgh, Indiana**

Sec. 8. Wastewater treatment sludge, hazardous waste code F019, that is generated by Alcoa Corporation (Alcoa) at the Warrick Operations, Newburgh, Indiana is excluded from regulation under this article so long as management of the waste complies with all of the following conditions:

(1) No concentration of a constituent listed in Table 1 may exceed the delisting level for that constituent listed in Table 1. The delisting levels listed in Table 1 are the maximum concentration of that constituent measured in the extract of the wastewater treatment sludge using the extraction methods described in subdivision (2).

Table 1. Maximum Delisting Levels for Inorganic and Organic Constituents  
Chemical Abstract Service Registry

Constituent	Number	Delisting Level
Antimony	7440-36-0	0.390 mg/L <sup>1</sup>
Arsenic	7440-38-2	0.360 mg/L <sup>1</sup>
Barium	7440-39-3	100 mg/L <sup>1, 3</sup>
Beryllium	7440-41-7	0.790 mg/L <sup>1</sup>
Cadmium	7440-43-9	0.280 mg/L <sup>1</sup>
Chromium (trivalent)	7440-47-3	5.0 mg/L <sup>1, 3</sup>
Chromium (hexavalent)	18540-29-9	3,800 mg/kg <sup>2</sup>
Copper	7440-50-8	17,000 mg/L <sup>1</sup>
Cobalt	7440-48-4	42.5 mg/L <sup>1</sup>
Lead	7439-92-1	5.0 mg/L <sup>1, 3</sup>
Mercury	7439-97-6	0.150 mg/L <sup>1</sup>
Nickel	7440-02-0	53.3 mg/L <sup>1</sup>
Selenium	7782-49-2	1 mg/L <sup>1, 3</sup>
Silver	7440-22-4	5 mg/L <sup>1, 3</sup>
Thallium	7440-28-0	0.16 mg/L <sup>1</sup>
Tin	7440-31-5	430 mg/L <sup>1</sup>
Vanadium	7440-62-2	40 mg/L <sup>1</sup>
Zinc	7440-66-6	530 mg/L <sup>1</sup>

<sup>1</sup> mg/L means milligrams per liter.

<sup>2</sup> mg/kg means milligrams per kilogram.

<sup>3</sup> The delisting level for this constituent was higher than the toxicity characteristic regulatory level in 40 CFR 261.24; therefore, the toxicity characteristic regulatory level applies.

(2) Except as provided in clauses (C) and (D), Alcoa shall obtain two (2) duplicate representative samples of the delisted waste each quarter and analyze them for the constituents listed in Table 1 as follows:

(A) Constituents must be extracted using the following:

(i) Method 1311, Toxicity Characteristic Leaching Procedure (TCLP)\*.

(ii) Method 1330A, Oily Waste Extraction Procedure\*, if oil and grease levels exceed ten thousand (10,000) milligrams per kilogram.

(iii) Method 3060A, Alkaline Digestion for Hexavalent Chromium\*.

(B) Constituents must be analyzed using the following:

(i) Method 6010B, Inductively Coupled Plasma-Atomic Emission Spectrometry\* or Method 6020, Inductively Coupled Plasma-Mass Spectrometry\*.

(ii) Method 7470A, Mercury in Liquid Waste (Manual Cold-Vapor Technique)\*.

(iii) Method 7196A, Hexavalent Chromium (Colorimetric)\*.

(C) If the relative percent difference (RPD) between the two (2) samples is forty percent (40%) or less for the first four (4) quarters, then Alcoa may obtain and analyze one (1) representative sample of the delisted waste each following quarter. The relative percent difference is calculated for each constituent and equals one hundred (100) times the absolute value of the difference between the results divided by the average of the results, as follows:

$$RPD = 100 [(|x_1 - x_2|) / \{(x_1 + x_2) / 2\}]$$

where  $x_1$  equals sample results and  $x_2$  equals duplicate results.

(D) If any sample result shows any constituent listed in Table 1 at or above fifty percent (50%) of the delisting level for that constituent, then Alcoa must analyze two (2) duplicate samples each quarter until authorized by the department to analyze one (1) sample each quarter.

(E) Nothing in this section prohibits Alcoa from requesting at any time that the solid waste management board modify this section to allow less frequent verification testing.

(3) If waste testing or other information available to Alcoa shows that any constituent in Table 1 has exceeded the delisting level for that constituent, or Alcoa makes changes in the Warrick Operations that cause hazardous constituents listed in Table 1 to exceed the delisting level for that constituent, Alcoa must do all of the following:

(A) Notify the department in writing within ten (10) days of first possessing or being made aware of such data.

(B) Demonstrate that the waste continues to meet all delisting levels in Table 1.

(C) Manage the waste as hazardous waste until Alcoa receives written approval from the commissioner to resume managing the waste under this exclusion.

(4) Alcoa must submit an annual report that summarizes the data obtained through quarterly verification testing required by subdivision (2) to the department by February 1 of the following year. The report must include the results of each required analysis for the previous calendar year.

(5) Alcoa must compile, summarize, and maintain records of operating conditions and analytical data. The records must be:

(A) maintained for a minimum of five (5) years; and

(B) made available for inspection by the department during normal working hours.

(6) All data required by this section must be accompanied by a signed copy of the certification statement in 40 CFR 260.22(i)(12).

(7) The delisted waste must be disposed of in a:

(A) municipal solid waste landfill permitted under [329 IAC 10](#); or

(B) hazardous waste disposal facility permitted under this article.

(8) If, at any time after disposal of the delisted waste, Alcoa possesses or is otherwise made aware of any data, including, but not limited to, leachate data or ground water monitoring data, or any other data relevant to the delisted waste indicating that any constituent identified in Table 1 is at a level in the leachate that is higher than the specified delisting level, then Alcoa must report such data in writing to the department within ten (10) days of first possessing or being made aware of that data.

(9) No more than four thousand two hundred (4,200) cubic yards of delisted waste may be disposed of in any calendar year under this exclusion.

\*Test methods referenced in this rule are found in U.S. Environmental Protection Agency Publication SW-846, "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", Third Edition, available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, Pennsylvania 15250-7954, (202) 783-3238.

(Solid Waste Management Board; [329 IAC 3.1-6-8](#))

#### [Notice of Public Hearing](#)

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